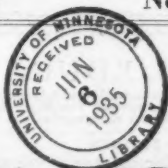


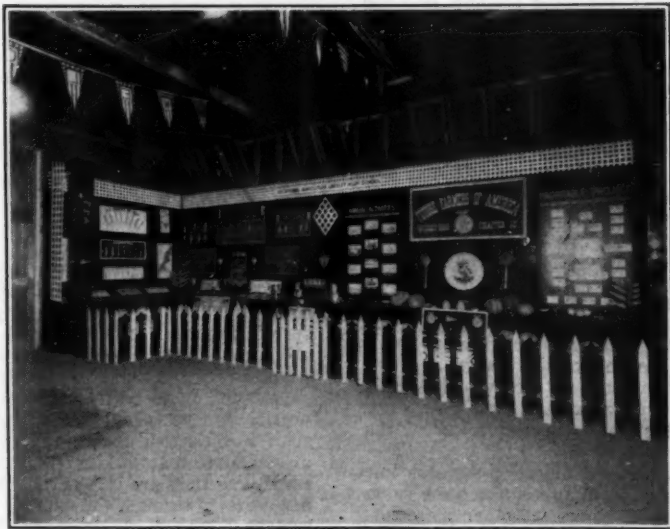
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Agricultural Education



Well-planned exhibits are an effective way of acquainting the public with vocational agriculture. Also such exhibits provide an incentive to the boys that adults seldom fully appreciate. This exhibit was arranged by the Greeley High School, Colorado, at the Weld County Junior Fair, September 8-9.

"Real leadership is likely to be unobtrusive rather than as a blatant captain's command."—CHARLES E. REEVES.

EDITORIAL COMMENT

AGRICULTURAL EDUCATION

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MORE AND BETTER RESEARCH

THE Yankee who reported, following his trip into the wilds of Africa, that what that country needs is bigger and bolder elephants merely illustrated typical American conceit, exaggeration, and craze for superlatives. The remark however, may be appropriately paraphrased to serve as a stimulant to thinking among our workers in agricultural education. What the field of agricultural education needs is more and better research.

Like most derived terms, research is variously defined. For present purposes it may be thought of as a persistent and critical attempt to discover the truth.

Some workers in education profess not to care for research. They say they want none of it; they are fed up on it. Their position is not new. Those who are not interested in finding out the truth have, like the poor, been always with us. To them, relative truth is absolute. Once the truth, always the truth. Let well enough alone. It's just the laissez faire philosophy of life speaking again. The most condemning observation of those who hold this point of view is that from their group has come practically none of the progress of the world, in the sciences, the humanities, or in education.

Then there are those who do not object to research but who want theirs in mild doses. They recognize some value from it, but they fear they may neglect other more important duties. More important than finding out the truth,—what may it be? If it is well to know the truth about some phases of the job, why not about all? He who is afraid of the truth or wants to know only a part of it scores low in sound thinking, if not in ethics and ideals.

But theory must be checked by practice. So research activities must be checked against the greatest immediate need of the job, the most efficient use of time, and the quality of ability or personnel at disposal. Granted that a going job must continue to go, then those who would apply the brakes to the movement for research deserve some recognition. In most cases it would appear that a satisfactory adjustment will come through a distribution of duties whereby those who have the ability to recognize need for further truth and the ability to search efficiently for it may be so assigned. In the meantime, those who keep the routine affairs of administration and instruction moving can do so, basing their procedures upon the best that is now known. But in no case should the door to good research be closed, always left ajar. Knowledge should be stored in a spring, not in a cistern.

For those who would promote research, either actively or indirectly, the possibilities for more and better research are found in at least three activities. Provide an ever-continuing analysis of the present programs of administration and instruction in their fullest scope to locate the weak spots. "Is there a better way to do this?" "Why do I require the teachers to do this?" "Why am I teaching

this?" are a few questions that may serve to start the analysis. When the answer is "It has been found to give the best results in terms of accepted objectives in a number of trials carefully conducted and measured under normal conditions", then we need not tarry longer at this point. There are probably more vulnerable points of attack further on. But if the answer is "Because my predecessor did it this way" or "It seems to me this is the right way", then you may well pause for query. Can the truth be established on this point? Is there a procedure in research which can be applied to this situation and which will give a better procedure or, if not that, a higher confirmation that the present procedure is right? Empirical thinking is excused, is even approved, in the early stages of new movements, but when it is allowed to continue after appropriate scientific procedures are available, then it becomes a reflection upon its sire.

Keep informed on the findings of research studies in your special field of activity by making available to yourself the reports of all research studies bearing upon your duties as released in publications and special reviews. While this procedure may not necessarily result in more research, it should result in better research as you keep informed of the scope and variety of studies completed and the techniques employed. To this end also, in the promotion of research the preparation of an abstract or summary of study completed should be required by the adviser and the summary disseminated or announced as available to those interested. The inclusion of a criticism of the study including its weaknesses and suggestions of problems for further study, is highly desirable as a stimulant to both more and better research.

Prepare graduate students to pursue research by offering, early in their graduate experience, instruction in the methods of conducting research in education. To acquaint students with the dozen or more techniques of research, to direct them to develop standards for the critical evaluation of the use of each technique, and to develop their ability to determine the most appropriate procedures in specific problems proposed for their study, and to criticize procedures in completed studies, is to "remove mountains" from the road to more and better research.

In brief, more and better research in agricultural education can be rendered a major service by a continuing analysis of the field to determine worthy studies, by making available, to its workers the findings of new studies as rapidly as they are completed, and by the preparation of new workers through the offering of courses of appropriate content.—W. F. S.

THE EDUCATION INDEX

THE first cumulated volume of *The Education Index* just published by the W. H. Wilson Company, 950-72 University Avenue, New York City, contains a complete index to the contents of *Agricultural Education* from January 1929 to June 1932. This index lists the best current literature in the educational world. Consult *The Education Index* at your nearest library.

NATIONAL CONVENTION OF FUTURE FARMERS

THE January issue will contain news of the National Convention of Future Farmers at Kansas City. It was impossible to get this news in the December issue without delaying publication. It may be that some of our readers do not know that this magazine goes to press a full month before publication.

ACQUAINTING PEOPLE WITH OUR WORK

MAYBE your superintendent or principal is seeking information on agricultural education. Maybe your road would be smoother if your superintendent were a reader of this magazine. Show him this number. If he should be interested in becoming a subscriber, send his subscription to the person responsible for subscriptions in your state.

Agricultural Education December 1932



Professional



The Influence of John Dewey in Education

ARTHUR K. GETMAN, Chief Agricultural Education Bureau, New York

A VITAL measure of the progress of any age is the quality of its thought. Each step in the improvement of ways of thinking affects mankind more than improvement in any other sphere. To Professor John Dewey the race owes an unpayable debt of gratitude



Arthur K. Getman

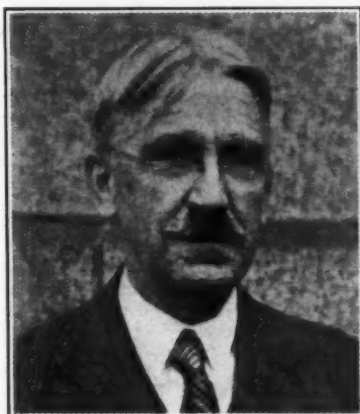
for his depth of thought and for his influence in the schools throughout the civilized world. Dr. Dewey first caught the attention of the world by his work in the School of Education in the University of Chicago. In the decade (1894-1904) at Chicago, he revealed the scientific trend in his thought. Very early he seemed to build upon Spencer's appeal "for more science and less literature in education", and added that the teaching in science should not be book learning, but should come to the pupil through actual participation in useful employment. Durant declared, "Dewey has no great regard for a 'liberal' education; the term was used originally, to denote the culture of a 'free man,'—i. e., a man who never worked; and it was natural that such an education should be fitted rather to a leisure class in an aristocracy than to an industrial and democratic life. Now that we are now nearly all of us caught up in the industrialization of Europe and America, the lessons we must learn are those that come through occupation rather than through books. Scholastic culture makes for snobbishness, but fellowship in occupations makes for democracy. In an industrial society the school should be a miniature workshop in a miniature community; it should teach through practice, and through trial and error, the arts and discipline necessary for economic and social organizations. And finally, education must be reconceived, not as merely a preparation for maturity, but as a continuous growth of the mind and a continuous illumination of life. In a sense, the schools can give us only the instrumentalities of mental growth; the rest depends upon our absorption and interpretation of experience. Real education comes after we leave school; and there is not reason why it should stop before our death."¹

In this brief statement Durant helps us grasp a panoramic view of the sweep of Dewey's influence in education. In his *Democracy and Education* Dewey brings the varied threads of his philosophy to a focussing point and centers them all in the challenge of producing a

better generation of human beings. In our brief survey of the contributions of this great American, especially as they affect the responsibility of the school in training for useful employment in the open country, we must be content with suggesting only in roughest outline and through quotations some of his views and expressions.

There seem to be at least five principles enunciated by Dewey in his dynamic sweep of the problems and the needs of the school. Let us examine them individually.

First, the nature and the needs of the pupil are central in education. He declared, "Now the change which is coming into our education is the shift-



John Dewey

ing of the center of gravity. It is a change, a revolution, not unlike that introduced by Copernicus when the astronomical center shifted from the earth to the sun. In this case the child becomes the sun about which the appliances of education revolve; he is the center about which they are organized."² Indeed this was revolutionary thought. Considering subject matter and activities as means rather than as ends in themselves, to develop pupils and to enrich living was a radical departure from practices found in schools both then and now. The development of our present notions of "the child centered school" dates primarily from Dewey's early insistence upon the central place in education which the pupil should occupy. Concerning his own experiences he declared: "It has been demonstrated that it is possible for children to lead the same natural lives in the school that they lead in homes of the right sort, outside of school; to progress bodily mentally and morally in school, without ficti-

tious pressure, rewards, examinations, grades or promotions; while they acquire sufficient control of the conventional tools of learning and of the study of books—reading, writing, and figuring—to be able to use them independently."³

Second, education is the process of active experiencing. In Dewey's words: "Education may be defined as a process of the continuous reconstruction of experience, with the purpose of widening and deepening its social content, while at the same time the individual gains control of the method involved."⁴ Further, in a radio address in 1932 he declared in part: "Democracy will be a farce unless individuals are trained to think for themselves, to judge independently, to be critical, to be able to detect subtle propaganda and the motives which inspire it. Mass production and uniform regimentation have been growing in the degree in which individual opportunity has waned. The motto must be; 'learn to act with and for others while you learn to think and to judge for yourself.'"⁵

Third, intimately associated with the principle of "experience", Dewey expresses the doctrine of the relationship existing between pupil interest and pupil effort. From the beginning in Dewey's writings, he linked these two factors of pupil growth. Each factor appears to include the other. In *Interest and Effort* he states this relationship as follows: "The genuine principle of interest is the principle of the organized identity of the fact to be learned or the action proposed with the growing self; that it lies in the direction of the agent's own growth, and is, therefore, imperiously demanded, if the agent is to be himself. Let this condition of identification once be secure, and we have neither to appeal to sheer strength of will nor to occupy ourselves with making

"The Influence of John Dewey in Education", beginning on this page, is the first of a series of contributions in the Professional Section, dealing with the influence of leading American educators in the schools. It is becoming increasingly apparent that persons engaged in any specialized branch of education, face a new challenge to integrate their program with the activities of the school as a whole and to keep abreast of the thinking of the leading men in the profession of education. In the present series of contributions to this Section, it will be the purpose of the authors to present a brief survey of the influence of a selected group of leaders, including such men as John Dewey, William James, Charles W. Eliot, E. F. Cubberley, E. L. Thorndike, Alexander Inglis, W. W. Charters, and Franklin Bobbitt. The editorial staff contemplates holding the type on these articles, which will extend through the June number, and assembling the contributions in a folio, at a nominal cost.—A. K. Getman.

things interesting".⁶ Elsewhere in his writings he stresses the place of subject matter in relation to the pupil's interest and effort. For example, in *How We Think* he suggests that "thinking is an ordering of subject matter with reference to discovering what it signifies or indicates. Thinking no more exists apart from this arranging of subject matter than digestion occurs apart from the assimilating of food. The way in which the subject is furnished marks therefore, a fundamental point. If the subject matter is provided in a too scanty or too profuse fashion, if it come in disordered array or in isolated scraps, the affect on habits of thought is detrimental."⁷

Later in the same chapter occurs one of the most dynamic and far-reaching statements to be found anywhere in Dewey's writings. He declares with emphasis: "Instruction in subject matter that does not fit into any problem already stirring in the student's own experience, or that is not presented in such a way as to arouse a problem, is worse than useless for intellectual purposes. In that it fails to enter into any process of reflection, it is useless; in that it remains in the mind as so much lumber and debris, it is a barrier and obstruction in the way of effective thinking when a problem arises."

Principle of Scientific Thought

Fourth, we may list the principle of scientific thought. As one traces the thread of Dewey's philosophy of education through the woven fabric of his many books and pamphlets, he is impressed by the continuous emphasis upon the importance of building correct habits of scientific thought. In 1909 he declared: "In contrast with the empirical methods stands the scientific. Scientific method replaces the repeated conjunction or coincidence of separate facts by discovery of a single comprehensive fact, effecting this replacement by breaking up the coarse or gross facts of observation into a number of minuter processes not directly accessible to perception."⁸ Later, in discussing his creed in his *Character and Events*, he considered the scientific habit of mind in some detail. Because of the paramount significance of his suggestions in this field in relation to vocational education, we quote three paragraphs from this volume:

"One of the only two articles that remain in my creed of life is that the future of our civilization depends upon the widening spread and deepening hold on the scientific habit of mind; and that the problem of problems in our education is therefore to discover how to mature and make effective this scientific habit. Mankind so far has been ruled by things and by words, not by thought, for till the last few moments of history, humanity has not been in possession of the conditions of secure and effective thinking. Without ignoring in the least the consolation that has come to men from their literary education, I would even go so far as to say that only the gradual replacing of a literary by a scientific education can assure to man the progressive amelioration of his lot. Unless we master things, we shall continue to be

mastered by them; the magic that words cast upon things may indeed disguise our subjection or render us less dissatisfied with it, but after all science, not words, casts the only compelling spell upon things.

"Scientific method is not just a method which it has been found profitable to pursue in this or that abstruse subject for purely technical reasons. It represents the only method of thinking that has proved fruitful in any subject—that is what we mean when we call it scientific. It is not a peculiar development of thinking for highly specialized ends; it is thinking so far as thought has become conscious of its proper ends and of the equipment indispensable for success in their pursuit.

"The modern warship seems symbolic of the present position of science in life and education. The warship could not exist were it not for science: mathematics, mechanics, chemistry, electricity supply the technic of its construction and management. But the aims, the ideals in whose service this marvelous technic is displayed, are survivals of a pre-scientific age, that is, of barbarism. Science has as yet had next to nothing to do with forming the social and moral ideals for the sake of which she is used. Even where science has received its most attentive recognition, it has remained a servant of ends imposed from alien tradition."⁹

In all types of vocational training, the terms "skill" and "scientific thought" or business judgment are much in evidence. Dewey quotes Clifford as contributing an effective differentiation between these terms, in the following words: "Skill enables a man to deal with the same circumstances that he has met before, scientific thought enables him to deal with different circumstances that he has never met before. Scientific thinking is the application of old experience to new circumstances."¹⁰

Developing Good Judgment

Fifth, developing good judgment constitutes a fundamental aim of education. Dewey's continued emphasis upon the training of pupils to meet the changing conditions of economic, social, and civic life, with sound judgment, is a paramount influence in education. He declares, "If our schools turn out their pupils in that attitude of mind which is conducive to good judgment in any department of affairs in which the pupils are placed, they have done more than if they sent out their pupils merely possessed of vast stores of information, or high degrees of skill in specialized branches."¹¹

His steadfast holding to the specific steps involved in a complete act of thought and his suggestion of the steps which constitute the making of a good judgment, remain a sound guide to all teachers in building courses of study and in choosing appropriate methods of teaching. A quarter of a century ago his five-fold steps in reflective thought were expressed. They are recorded in *How We Think* in the following terse language: "There are five logically distinct steps: (i) a felt difficulty; (ii) its location and definition; (iii) suggestion of possible solution;

(iv) development by reasoning of the bearings of the suggestion; (v) further observation and experiment leading to its acceptance or rejection."¹² In the same volume, under the chapter heading, Judgment: The Interpretation of Facts, he skillfully analyzes three features of a decision or a judgment as: "(1) a controversy, consisting of opposite claims regarding the same objective situation; (2) a process of defining and elaborating these claims and of sifting the facts adduced to support them; (3) a final decision, or sentence, closing the particular matter in dispute and also serving as a rule or principle for deciding further cases."¹³

It will be clear that it is quite out of the question with the limitation of space here imposed, to present Dewey's comprehensive analysis of the factors of judgment and the problems of teaching judgment. Perhaps an effective means of summary will be to quote his definition of a good judge which quite properly may be regarded as a teaching aim. He writes, "To be a good judge is to have a sense of the relative, indicative or signifying values of the various features of the perplexing situation; to know what to let go as of no account; what to eliminate as irrelevant; what to retain as conducive to outcome; what to emphasize as a clue to the difficulty. This power, in ordinary matters, we call *knack, tact, cleverness*; in important affairs, *insight, discernment*. In part it is instinctive or inborn; but it also represents the funded outcome of long familiarity with like operations in the past. Possession of this ability to seize what is evidential or significant and to let the rest go is the mark of the expert, the connoisseur, the *judge*, in any matter."¹⁴

Special Relation to Agriculture

THESE five principles clustering around the ideas of the nature and the needs of pupils, the value of active pupil experience, the factors of interest and effort, scientific thought, and the making of sound judgments, have far-reaching implications in the teaching of agriculture on whatever level we choose to study. For more than two decades, agricultural education has undergone the struggles of a new type of teaching. Throughout the world, persons choosing this branch of education as their special professional career now find themselves at a vantage point from which they may survey the influence of Dewey's thinking. Agriculture is fundamentally an applied science. Its progress depends essentially upon the development of research facts first in the field of pure science and then in the specific applications to the problems of production and marketing. It is difficult to evaluate the paramount influence of Dewey's conception of "scientific thought" upon the whole procedure of research, resident teaching, and extension work. In few fields of human endeavor can one find more satisfying evidence of scientific thought than in the field of agricultural education.

Reference has been made to the differentiation between "skill" and "judgment", as factors in teaching any occupation. Our present progress in

(Continued on Page 96)



Supervised Practice



The Dominant Purpose of Home Projects

G. A. SCHMIDT, Colorado Agricultural College

I RECENTLY had an opportunity to gather from a large group of teachers of vocational agriculture, by means of a questionnaire, their points of view regarding the dominant purpose and value of the supervised home project work conducted by boys enrolled in high schools. These points of view were obtained from 147 teachers, and not more than 5 in any one state. Slightly more than thirty states were represented in the study. The results of this inquiry are given in the table which follows:

Point of view regarding the purpose and value of the supervised home project work.	No. of teachers holding pt. of view	Per cent
A. As something to be done because it is required	5	3.4
B. As an opportunity for the pupils to earn money while going to school	4	2.8
C. As an opportunity for the pupils to obtain some practical farm experience	16	10.9
D. As an opportunity for the pupils to apply the theoretical facts and principles discussed in the classroom	10	6.8
E. As the important training device by means of which the pupils will acquire experience in the management of farm enterprises and skill in the execution of the various jobs involved in such enterprises.	112	76.1
Total	147	100.0

As shown in the table, 112 of the 147 teachers of vocational agriculture, or 76.1 per cent, reported that they considered the dominant purpose and value of the supervised home project work conducted by the boys to be: "The important training device by means of which the pupils will acquire experience in the management of farm enterprise and skill in the execution of the various farm jobs involved in such enterprises". The writer believes that the great majority of teachers considered have the proper point of view regarding the dominant purpose and value of the project work in vocational education in agriculture.

Other dominant purposes of the supervised home project work as reported by 30 teachers were:

1. An opportunity for pupils to earn money while going to school.
2. An opportunity for pupils to obtain some practical farm experience.

3. An opportunity for the pupils to apply the theoretical facts and principles discussed in the classrooms.

It appears to the writer that these three purposes have a place and play a part in supervised home project work. They should, however, in his opinion be regarded as subordinate to the outstanding function of such work.

Five of the 147 teachers of vocational agriculture who returned the questionnaires in regard to this matter, stated that they considered the dominant purpose of the project work merely "as something to be done because it is required." Whether these teachers would provide some other kind of practical training experiences for the boys in their vocational agriculture classes or provide none at all is not known. It can safely be concluded, however, that no effective preparatory vocational training can be given without adequate training experience, and that supervised home projects is the best means known of supplying this experience in vocational training in agriculture. The following quotation clearly shows the need for adequate training experiences as an integral part of a vocational training program.

"All effective vocational training requires training in both theory and practice—in doing and in thinking about doing. Practice in doing anything is needed to explain and fix theory, while theory is necessary to guide and improve skill. Both are necessary to real job intelligence. The more intimately and closely theory (knowledge) and practice (skill) can be related, the more effective will be the training in each, and the more resourceful will be the job intelligence developed in the student and worker. If you want to become a good golf player, you must practice golf while you think golf, read about golf, and take lessons in the theory and practice of golf. Similarly, if you want to train a farm boy to become a successful dairyman, you must have him take care of cows as they should be handled, while at the same time you teach him the functioning facts he needs to know and use in his work."

*Prosser, Charles A., and Allen, Charles R., *Vocational Education in a Democracy*, pp. 275-276.

Educated Helplessness

"We thank you," said the Iroquois Chief in 1774 to the Governor of Virginia who had offered to educate some of their young men, "We have already had experience of your education, and some whom you have educated in all your sciences come back to us bad runners, ignorant of woodcraft, unable to trap a deer, snare a perch, to build a wigwam; we cannot accept your offer, though we appreciate your goodwill, but we will take a few of your sons and make men out of them."—From N. E. A. Proceedings.

Responsibilities of the Teacher In Supervising Projects

THE following list of teacher responsibilities in project supervision were developed last summer in a class in "Administration and Supervision of Home Projects" at The University of Wyoming, taught by Mr. R. P. Jeppson, State Supervisor of Vocational Agriculture of Nevada. Undoubtedly all teachers of vocational agriculture can find suggestions in this list of responsibilities.

1. To see that all project jobs are efficiently planned in advance.
2. To see that project plans are carried out.
3. To see that project records are kept in a complete, accurate, and legible form.
4. To work out for himself a definite plan for project visitations.
5. To keep a written record of conditions found and recommendations made at the time of project visits.
6. To contact one member of the family besides the boy on each visit, to keep the parents up to date on the project.
7. To follow a comparatively definite procedure on each project visit.
 - A. Make definite appointment with boy.
 - B. Contact parents and get their ideas about the project.
 - C. Call for project record book.
 - D. Check the book and take it along to inspect the project.
 - E. Try to give some worthwhile instruction on the job.
 - F. Help the boy with some jobs that need doing.
 - H. Plan to handle any unforeseen events or conditions which arise.
 - I. Praise work of boy to parents and show personal interest in him.
 - J. Make recommendations for the future conduct of the project, in the presence of the parents.
 - K. Leave the place and make a written record of the visit as soon as out of sight.
8. Give publicity to worthwhile projects.
9. Discuss project problems in school with the class as a whole.
10. As a sales aid in selling the project idea to parents, render personal service when possible to the dad or mother of the boy.
11. To have a regular project day once a week for study, records, plans, etc.
12. To talk to some boy during each school day about his project.
13. To keep administrators well informed on project work.
14. To aid each boy in listing improved practices he has carried out.
15. To grade or rate the work done by each boy on his project in some manner.
16. To turn in project reports that will stand investigation.

Supervised Practice

J. A. LINKE, North Central Regional Agent.
(Taken from the 1932 North Central Regional
Conference Report)

GREAT progress has been made in the supervised practice programs in the various states of the region. In the beginning of the work we had a very simple program. The object was to take up some project, often selected in the spring and carried on for about six months. Now we are developing a real supervised farm-training program. The boy may be carrying two or three projects; in addition, he may be doing other supervised practice work. Many of the boys are developing long-time farmer-training programs which lead to farming. Many studies have been made of the supervised practice programs in the states. In South Dakota, Mr. Beard recently prepared a bulletin on "Building a Supervised Practice Program". Also, in Missouri, C. L. Angerer prepared a bulletin on the supervised practice in Missouri.

Needs

A careful survey should be made by the teacher in each community to determine the leading commodities produced in that community. The teacher should set up with his boys a long-time program of supervised practice, built on the needs of the community and the interests of the boy, in order to get the boy properly established in farming. The teacher should think of this long-time program, including instruction, as a training scheme for the boy, and it should be set up in such a way as to give the boy as careful a training as possible for the time the teacher has him under supervision. The supervised practice is a part of the training scheme, and the instruction is given to improve the efficiency of the boy in his supervised practice program.

Plans for Supervised Practice

The agent last year visited some 25 schools and found a great weakness in that the boys were not setting up definite plans for their supervised practice work. Each boy, with the aid of the teacher, should build his own plans for a long-time supervised practice program. Then each year, careful plans should be made for the jobs which he is undertaking such as budgeting, use of outlook material, just what procedures he will follow in the light of the information at hand etc. These plans should be brought back into the class for criticism so that the plans may be sound. The teacher then has something which he can work with when visiting the boy on his supervised practice according to plans set up. The state supervisor, as said above, should make a special effort through the summer to see that each teacher is on the job making a careful follow-up of each boy on his supervised practice program.

Records

A recent study of the records of supervised practice finds a weakness here. Many mistakes were made by the boys and teachers in reporting supervised practice. A careful checking up should be made to see that the accounts of the boys are complete and accurate.

Major Difficulties in Getting Boys to Prepare Adequate Project Job Plans

TO HAVE boys in vocational agriculture formulate efficient project plans should be one of the most important functions of the work at school in the agricultural period. In a vocational agriculture class boys study agriculture to determine the most efficient way to do this or that job in their supervised farm practice programs. The project job plans should incorporate these efficient ways.

During the 1932 Annual Conference of Wyoming Teachers of Vocational Agriculture the following analysis of difficulties in getting boys to formulate efficient project job plans was made. Opposite the analysis are shown possible ways and means of overcoming the difficulties. Other teachers of vocational agriculture can profit by studying this summary.

Difficulties	Ways and Means of Overcoming Them
1. Boys fail to see the need for project planning.	a) Improve development of the preparation step in making project plans. b) Cite and use cases to show the reasons for making project plans. c) Individual conferences between boy, parent, and teacher. d) Teach boys how to study and analyze problems.
2. Hard to get boys to try out a sufficient number of improved practices, and incorporate these in their plans.	a) Call pupil's attention to practices of the best farmers in the community. b) Compare practices followed in same kind of projects and results obtained. c) Get consent of parent to allow boy to try out improved practices. d) Teacher prepare list of improved practices in various farm enterprises. e) Make arrangements with owner of tenantfarms for use of improved practices.
3. Keeping boys interested so they will include sufficient detail in project plans.	a) Carefully check all plans before boy writes them in record book. b) Compare good and poor projects, and through analysis show reasons for the success and failure. c) Hold frequent individual conferences with pupils. d) Give boys good grades for good project plans.
4. Teaching boys to think for themselves.	a) Establish confidence of the boy in his ability to think for himself. b) Convince boy that real education is self education. c) Teach the boy to test his ideas and judgment through practice. d) Teach boy to secure data and information from outside sources, evaluate and determine to what extent it is usable.
5. Avoiding unnecessary changes in plans.	a) Require complete plans in the beginning. b) Require good written reasons before permitting the boy to change his plans. c) Find out whether parents approve of change in plans. d) Select good project program in the beginning. e) Avoid influence of outsiders who promote things unsound. f) Develop, early, the idea of long-time program of supervised farm practice. g) Announce selections of projects. (Use chart where all boys can see it.) h) Teach boys to make definite statements in plans.
6. Setting up definite procedures which will insure project plans being carried out.	a) Teacher thoroughly plan his procedure in advance for directing boys in the making of their project plans. b) Get boys to make a complete list of all project jobs. c) Have boys prepare definite plans for each job. d) Check all plans carefully with boy and parent.
7. Getting boys to understand and follow good business practices.	a) Analyze all previous projects. b) Analyze local farm business. c) Use more time in teaching good business practices, in budgeting, preparing contracts, and records and accounts. d) Be sure boy includes in his plans a definite arrangement for conducting his project program.



Methods



Problem Procedures in Teaching Vocational Agriculture

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VERY little of what is advocated in this article concerning the techniques of problem teaching is based upon objective scientific investigations in either psychology or education. This does not mean that the techniques advocated are not based upon sound psychological foundations which will some day be established. It seems nearer the truth to believe that the methods of scientific (so-called) psychological investigation which produced our "laws of learning" are not designed to discover the more fundamental truths underlying the development of the higher processes involved in human learning. In the absence of such scientifically established truths progressive educators must do as intelligent human beings have always done under such conditions, they must be guided by findings and results of their observation and experience. This must be done, if progress is to be made, even at the risk of being accused of being more philosophical than scientific. No attempt will be made in this article to justify the techniques advocated by reference to either their psychological or philosophical foundations.

What the Problem Is

One hesitates to attempt definitions in a field where so much divergence of opinion exists, but there is a chance that some statement of what we understand by "problem teaching" might expedite our treatment of it. The central and essential characteristic of the problem method of teaching is the *solving of problems*. Any situation so designed and conducted as to require the mental activity of problem-solving for its successful consummation, may be said to be a problem, and any technique or method of teaching based upon the solution of problematic solutions may be regarded as "problem teaching".

This definition makes unnecessary the sterile task of attempting to distinguish between a problem and a project, for it recognizes that problem-solving is the essential educational activity in all worthwhile projects. A project is a large creative problem, involving several smaller subsidiary problems. Such a definition also excludes from serious consideration as problems such activities as enjoying a beautiful picture or any purposeful activity. The enjoyment of a picture has in it no element of problem-solving. In fact, the enjoyment would doubtless be lessened, or perhaps entirely eliminated, by making of it a problem-solving activity. Leaving one's chair and going to an accustomed drinking fountain to appease thirst is a purposeful activity, but it does not involve

problem-solving in its successful consummation. By the same line of reasoning, the learning of facts, no matter how important, for their own sake, and the doing of difficult tasks which do not involve problem-solving by the doer, are likewise eliminated from the category of problem teaching by the acceptance of this proposed definition.

Selection of Problems

There is no magic in the word "problem". The virtue in problem teaching lies in the quality of the problems utilized and the manner in which they are handled. Problem teaching can be no better than the quality of the individual problem, but it can readily be worse, if the problem is poorly taught. But we have a great penchant for catchwords and panaceas, and the term "problem" was very rapidly popularized and applied to all sorts of schoolroom activities, by all sorts of teachers. I once observed a teacher of agriculture say to his boys: "Our problem for tomorrow is 'oats'". Another teacher assigned the following as a problem in history: "Summarize the causes of the Civil War, the course of the war, and the result upon the North and the South." Very obviously, the "oats" assignment is not a problem. It is merely a topic and an extremely indefinite one at that. The second also is not a problem but merely a long, difficult task. But both teachers used the word "problem". Obviously, we cannot improve our teaching technique by using new terms, however progressive, while continuing to use old methods.

Teachers who essay to teach by the problem method must exercise extreme care in the selection of the problems. They must have a set of rather definite standards by which to evaluate the quality of the problems and they must have some measure of skill in applying these standards to the problems. While admitting the possibility of even better standards, I would like to suggest the following as the essential characteristics of a good problematic teaching situation.

1. First, the good problem demands thinking of a high order. A readymade answer to the good problem cannot be found in any reference or text book. The solution must be such that it can be determined only through a process of discovering and evaluating the significant relationships existing between the different factors and considerations which are involved in the total situation. Moreover, the more important types of relationships are demanded, i. e., those of cause and effect and comparison; and the more valuable types of

thinking, namely, reasoning, judgment, and creation. This thought quality is the real heart of a good problem, for if it is lacking there is no problem.

2. A second important characteristic of a good problem may be observed in the manner in which a good problem appeals to the interest of the student and challenges his mind. To do this a problem must be a real problem of real people in a real world. It must be so formulated that every boy is able to realize from his own experiences the reality and worthwhileness of the situation. It must be so true to life that every boy will appreciate the high chances of his meeting a similar situation in the not-too-remote future. Human sympathy and the realization of future need both function as strong appeals to the interests of young people, if skillfully manipulated. The poor problem lacks this quality of interest, and realism. It is not a real problem which anyone ever met or will meet outside the schoolroom. It is not challenging, for it does not tap any of the springs of human action. It is just a hard fact question or a long, tedious, sterile, artificial task set by a teacher. A good problematic situation must be interesting and true to life.

3. A good problem must be nicely adjusted in scope and difficulty to the ability of the class. A problem which is too easy and which involves very few and simple relationships cannot call forth the full capacities of the student. A problem is equally faulty if it is so difficult and involved that none or very few of the students can solve it properly without too much help from the teacher. Too much help extinguishes the soul of a child, but continued failure if a child is kept attempting problems which he never solves satisfactorily, because of their difficulty, will have the same effect. This is an important consideration from the standpoint of the mental health and personality development of the boy as well as from the point of view of the development of ability.

4. Another important characteristic is concerned with the statement of the problem. It must be very clearly and definitely stated or described if close thinking is to be done regarding its proper solution. The statement must be so formulated that all the important or significant circumstances or conditions, which should be considered in arriving at a sound conclusion by a process of thinking, are given, unless the problem has a local setting thus making it possible for the students to ascertain by inquiry or observation the conditions of the problem. This is a

characteristic all too often neglected in problem teaching.

Let us summarize briefly the characteristics mentioned, into a simple score card or set of standards for the evaluation of a problem.

1. A good problem must demand thinking of a superior quality in arriving at a satisfactory solution. It must call for reasoning, judgment, or creative thinking.

2. A good problem must be true to life. It must be a real problem of real people in a real world. It must be identical in nature with those problems which the students will be likely to meet in adult life.

3. A good problem must be interesting and challenging to the students.

4. A good problem must be adjusted in scope and difficulty to the ability of the students.

5. A good problem must be clearly and definitely stated.

There are doubtless other standards which make good claim for recognition, but these five are certainly of major importance and no one of them can be violated with impunity in the selection of problematic situations.

Types of Problems

But a random collection of problems, no matter how good they may be individually, does not guarantee the success of problem teaching. The use of unrelated, disconnected, and fragmentary problematic situations leads to a lamentable condition of confusion and lack of systematic organization and understanding of the essential principles. This condition has been pointed out repeatedly by the opponents of the problem method, and it constitutes a real source of weakness if care is not taken to prevent its occurrence. It can only be prevented by having problems of the proper types and by arranging them in the proper order. Sound pedagogy in this connection demands the use of four types of problems, differentiated on the basis of the objectives to be realized. Briefly stated these four types are as follows:

1. The inductive problem,—the purpose of which is to develop an understanding of the principle or principles to be mastered. The term inductive is borrowed from a common classification of the types of thought processes and refers to the process of arriving at a general truth or principle through an analysis of a concrete case or cases involving it. An inductive problem, therefore, is a problem the answer to which is a principle or a formulation of a general truth, discovered by a process of reasoning in the solution of the problem. The same end may be obtained by the use of a very simple judgment problem, in which the judgment required is not difficult and is involved mainly for its interest value. The discovery and understanding of the principles advanced in support of the proposed solution or answer of this simple judgment problem is the real objective, rather than the development of judgment ability.

2. The three additional types of problems might be classified as deductive, as they call for the application of principles already discovered and understood. This application may take

the form of reasoning, in which case the problem may be called a reasoning problem. Its purpose is to provide practice in the use of the principles or truths, to the end that reasoning ability may be developed. It is the type of problem, therefore, which should be used to follow the inductive problem in the teaching of the natural sciences, where an understanding of the scientific principles and the ability to use them in reasoning constitute the main objectives. The reasoning problem is the second type of problem in our list.

3. Another application of principles or systematic formulations of truth is made in judging between two or more proposed objects or plans. These judgment problems may, and often do, involve the same principles as the reasoning problem, but they differ from the reasoning problems in at least two important particulars. The solution of the reasoning problem can be definitely established and proven to be true at the time of its solution. Time alone can determine the wisdom of the conclusion reached in a judgment problem for this cannot usually be done at the time when the judgment must be made. This is the one difference and the other difference which is closely related to the first, has to do with the type of thinking demanded. To arrive at a correct solution of a judgment problem involves reasoning, but it also demands in addition a careful weighing and balancing, one against the other, of the various principles, facts, and circumstances which condition the situation. This judgment process remains to be done after all the reasoning possible has been completed. This judgment process is a delicate one, and its exact nature is not easy to describe, but it must be understood by the teacher who attempts to develop judgment ability in his students. Problems of the judgment type are probably most numerous in the lives of average people, as we are being continually called upon to make judgments in the selection of our food, clothing, equipment, investments, courses of action, etc. It is not difficult to appreciate the relation which exists between the correct solution of judgment problems and one's success in life.

4. In addition to the three types mentioned, a fourth is needed in problem teaching, for there remains a very important type of ability, perhaps most important of all: the ability to plan operations and courses of action, to devise ways and means of accomplishing results, to create new and improved methods of consummating desired objectives. It is true that judgment is involved in solving creative problems, but the ideas and plans must first be suggested or produced before the selection of the proper one to adopt can be made. The suggestion of these ideas or schemes and their formulation or application into a definite plan of action are the product of creative thinking. Probably the term "creative ability" best describes the particular type of ability required of persons who solve this type of problem. While creative ability doubtless makes demands upon a higher and rarer type of thought process than do the other types, it is held that it, too, may be developed by proper

training. Increased ability to do creative thinking must come, of course through directed practice in solving creative problems.

Summary: Teachers who attempt to teach by the use of problems must recognize four types of problems suitable for educational purposes, and differentiated on the basis of the objectives to be realized by each. These four types are:

1. The inductive problem, whose purpose is to develop understanding of the principles and other formulations of truth such as score cards, set of characteristics and standards, etc.

2. The reasoning problem, whose objective is the development of the power to apply principles to problematic situations requiring pure reasoning for their solution, in other words, the development of reasoning ability.

3. The judgment problem, which aims to develop the ability to make wise selections of choices of materials, equipment and courses of action.

4. The creative problem which aims to develop the ability to plan, to devise, and to create.

Not all school subjects which can be taught by the problem procedure, and we believe that most of them can be, will require the use of all four types. The effective teaching of the natural sciences calls for the use of inductive and reasoning problems. The problems best adapted to the teaching of the social studies will consist largely of the judgment type. The effective teaching of vocational agriculture demands extensive use of all four types, since in vocational agriculture we wish to develop understanding of the fundamental principles underlying progressive methods in agriculture; to develop the ability to apply these principles correctly to the many problems of judgment and selection, encountered in farming; and to develop the creative abilities demanded in the effective planning and execution of the many and varied enterprises which are involved in successful agriculture. Therefore, we must make judicious use of problematic situations so designed and arranged as to provide systematic practice in these three types of ability.

This does not mean that in teaching every phase of agriculture, problems of all three types must be used. There are some phases of instruction in which the development of creative ability is not the objective. In farm mechanics instruction, for instance, we may wish to develop in our students the ability to select a suitable tractor, but probably no one would hold that we should attempt to develop the ability to design a tractor. In farm management, on the other hand, we do wish to develop the ability to plan rotations, farm operations, and enterprises. The rule is that the type of problem to use must follow the nature of the objective to be realized. When understanding is the immediate objective to be realized, the inductive problem is used; when reasoning ability is the objective, reasoning problems are used; when judgment ability is the end, problems of the judgment type must be used; and when creative ability is desired, crea-

tive problems must be included in the teaching technique.

The Arrangement of Problems

All this means that a teacher must do more than merely collect a group of miscellaneous problems, no matter how good they may be individually. Not only must problems be designed or selected to accomplish certain definite objectives; they must be arranged in the proper order to form a group or series of problems which, when properly taught, will realize some specific objective or objectives.

The technique of arranging such a series of problems should be substantially as follows:

1. Select the particular objective or objectives to be taught. This objective, in agriculture, is most often an ability of either the manipulative, judgment, or creative type, with its accompanying standard or ideal.

2. Analyze the particular ability and determine the fundamental fact material involved. This fact material may be a principle or principles or a set of standards or characteristics.

3. Design, or in some other way secure one or more problems the solution of which will disclose to our students and cause them to formulate the fundamental truth we are seeking.

4. If the principles are rather involved and difficult of comprehension, one or more reasoning problems should be designed to follow the inductive problem. This would end the series in the case of the pure natural sciences, but in agriculture we must carry the students to the judgment stage at least.

5. Devise several judgment problems graded in difficulty, leading the students from the simpler to the more complex judgments which involve the principles taught in the preceding inductive problems. The number of these judgment problems required will depend upon the difficulty of the judgment ability to be developed and the intelligence of our students.

6. In certain phases of agriculture the last judgment problem may be the last one of the series, but if the desired objective is a creative ability, one or more problems involving the principles already taught, and requiring for their solutions the use of the desired creative ability, must be taught.

All of these problems, except the last mentioned, should be class problems. The last creative problem, if there is more than one, may be an individual problem, that is, each student in the class may be assigned a different problem, based upon his own individual needs and conditions relative to his home farm or his home project. The creative problem in this case should not usually be made the topic for class discussion, but be regarded as an opportunity for individual instruction.

It may occur to you that the reverse order may be used, by first starting with the creative; second, by analyzing it for the various judgments which are involved in its solution; third, by analyzing the judgment problems for the underlying principles or fact material; and thus finally coming to what corresponds to the inductive problems. It would then be necessary to retrace our steps solving the in-

ductive, the judgment, and the creative problems in the order which we have recommended. This is seen, not to be a different order to that described but the same order with the initial step of the determination of the inductive and judgment situations discovered by the student by the process of analysis. This initial step takes on the nature of the assignment in which the students are led to see the importance and significance of the inductive problems they are asked to solve. Such a technique may do very well for superior students and when the abilities to be developed are not very complex or difficult. In general we believe the sequence first described to be preferred, i. e., first, the inductive problem; second, the reasoning problem; third, the judgment problem or problems; and, fourth, the creative problem.

Teaching the Problem

But the use of good problems properly arranged does not provide an absolute guarantee of effective instruction. What happens to the problem in the classroom as the teacher attempts to teach it, is a vital factor in its failure or success.

The technique of handling the problem in the classroom consists of two main phases which, though they may be isolated and regarded as separate activities for the purpose of discussion, really merge in the actual classroom procedure. The first of these involves the placing of the problem before the class for study; the second has to do with the leading of the thought of the class toward the proper solution of the problem, after a study period has intervened during which the students have presumably reached a conclusion. Most of us will agree that class discussion should be utilized in performing both of these tasks. This means that a teacher must be skillful in handling classroom discussion, and this, we know, is a very difficult major teaching skill involving rather difficult minor ones. There is space to merely outline the proposed techniques for these two activities.

In arriving at any technique, the purpose to be achieved should first be determined. The chief purposes to be accomplished by the assignment of the problem are two. The first is to secure the interest of the students in the solution of the problem, and the second is to give some direction to the thinking of the students as they grapple with it. Very obviously the first step is a necessary one, for no problem is a good problem, or in fact, a problem at all, until it is embraced, as it were, by the student and made his problem; otherwise it is only a nice arrangement of words. The second step is important because we are trying to teach the student to think, and this is the place where the student starts thinking about the problem, and he should be given the proper direction and so taught to take the first steps in thinking correctly.

Both of these purposes may be realized by the skillful use of the following technique, very briefly outlined:

1. Motivate the problem to all. This will require the full use of all the in-

terest skills in a good teacher's repertoire. We take it for granted that these skills are well known to our readers.

2. Encourage the students to express a tentative solution of the problem. This may seem like a small matter, but I am confident that it is a very crucial point in the technique of thought teaching. There is not space to develop this idea, but its importance should be emphasized. The skillful use of the tentative solutions offered by members of the class will serve not only as a source of motivation, which will start and give direction to the thinking of the students, but also will make the meaning of the problem clear to all. This last is important.

3. Refrain from giving the student exact references to sources of information on the problem, to the end that he may gradually develop the ability to find information when he needs it, without the help of a teacher. Our chief object as teachers is to teach our students to do without us. We cannot be at their elbows all through life. Some day they must find the information they need without our help. Let us teach them to do it now. Let us hold ourselves responsible for keeping our agricultural library up to date and catalogued systematically and let us teach our students how to use it.

4. The attempted solution will sometimes reveal special difficulties, sometimes in the case of the whole class and sometimes only in the case of individual students, of such a nature as to constitute an effectual barrier to the successful solution of the problem by the class. These special difficulties should be removed when they are brought to light, as far as necessary by proper explanation.

The second phase of the class discussion is concerned with reaching the proper solution to the problem in the proper manner. The main purpose to be achieved is the direction and checking of the thought of members of the class, to the end that weaknesses in their method of thinking may be eliminated and correct habits of thought established. Another major purpose is to arrive at the correct solution. The problem may be an important one, the subject matter taught by it may be sound and essential, and it may be important to reach the proper solution because of this, but it is also true that the problem is an agency by and through which we may establish or develop in our students the habit and ability to think correctly. This gives to the exercise a very significant meaning and importance. It is here that the teacher's mind comes into contact with that of the student; it is here that he can follow the operation of the student's thought, noting its characteristic weaknesses; it is here that the teacher can, by judicious questioning and by example, make the student conscious of these weaknesses and help him to eliminate them from his habitual thought processes.

Space does not permit a more extended discussion of this important exercise. Here, most certainly, many of our most serious errors and shortcomings as teachers are to be found.

(Continued on Page 96)



Farm Mechanics



Ten Points on Farm Shop Management

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SUCCESS in any kind of work or enterprise is largely due to good management. Many factors enter into the good management of a shop where future farmers of America are in training. The following are but a few of the more outstanding.

1. The Shop:

The shop should be large enough to allow all the boys in the class to work without interfering with one another, and to have an outside door big enough to admit farm machinery. A three-section, or triple, garage door that swings in is well suited for a shop. It does not require wall space as does an inside rolling door; it provides a tighter fit when closed than rolling doors; and one section may be used as an ordinary door for most passage.

It is desirable that a clear floor space be arranged in front of the main door so that machinery may be run in any time, or the space used for large construction work. If shop space is limited so that benches need to be placed there, they should be free of the floor so as to be pushed aside when desirable.

2. The Equipment:

The equipment of the shop should be the same as the farmers of the community can profitably own on their individual farms. It is unsound to educate a person to do work with machines which he cannot have where he is to operate. He will need to re-educate himself when time for action appears in his later program. He will be dissatisfied, uneducated in the work for which he thought himself prepared. He will be apt to condemn his training or make an unwise investment.

3. Arrangement of Equipment:

A desirable arrangement is to so place the tools in the shop that any tool desired by a member of the class can be got with the minimum of time and annoyance and without interfering with other members of the group. It has been found good shop practice to have the tools that are most commonly used at the work benches, and the special tools that are infrequently used at convenient places on the walls.

4. Tools:

All edge tools must be in good working condition. If a tool in the hands of a boy needs attention, it is his job to fit it instead of exchanging for another. The first job in any shop work is to learn how to fit tools and experience the pleasure that attends the use of tools that are well-fitted.

It is better practice to keep special tools that are infrequently used up on racks that are in full view on the

walls of the shop or in a cabinet than in boxes or drawers.

A well-planned shop provides a definite place for each tool, and a part of the shop training for the boys is to place tools where they belong when through using them. Credit should be given for this aspect of the work.

The boys should consider themselves as custodians of property which their parents as taxpayers have provided for them. A lost tool reflects unfavorably upon their ability, and a member of the group who does not willingly take his part in this aspect of his training is apt to become a burden on the community in later years. His fellow pupils and teacher need to know this and deal with his education to remedy this weakness.

5. Supplies:

If such supplies as nails, screws, bolts, lumber, paint, and other materials are arranged in the shop so as to give the shop a neat and orderly appearance, there is reason to expect such order to exist in the home shop equipment and other possessions of the boys in training as well.

6. Storage:

The well-planned shop is provided with lockers in which the boys may keep their shop clothes and work that is in the process of construction or repair.

7. The Work:

It is desirable that more kinds of work than one be going on at a time. In that way more boys can work with limited equipment and the course of work is not so inclined to become narrow in its scope. Since this is a general shop having but one or two forges, it is quite necessary that it or they be in use a considerable part of the time to allow all the boys to have blacksmithing experience. The same may be said of the grinder, plumbing tools, taps and dies, harness repair equipment, etc.

To assure that the shop training becomes vital, boys should be required to bring repair work from their homes such as tools that need grinding or honing or handles fitted, saws that need filing, utensils that need to be soldered, tools that need reshaping and tempering.

8. Records:

It is desirable to keep an open record of the work done by members of the class so that each may know the amount of work he has done up to date, his speed as compared with others, and also the teacher's estimate of the quality.

9. The Individual:

A shop course needs to vary to suit the needs, previous training, and

natural ability of the individual. It is unfair to some individuals in a class of boys if all are required to do the same work and are kept together. Some boys acquire skills much more readily than others. For them to be kept back to a speed of the slow fellows is apt to lower their good speed habits. To expect the slow worker to keep pace with those naturally more gifted may result in a poor standard of workmanship. Each should work at the highest speed and standard of workmanship that he naturally can command. This will result in a variety of work going on at one time. The work of the teacher will be more difficult than if all are doing the same task, but teaching pupils in shop work as individuals is superior to group instruction.

10. The Shop as a Community Shop:

To function most efficiently as a community shop, former students should be permitted to bring in special work to the school shop and repair it at such times as may be arranged by the teacher in charge. Why not have former students gum their crosscut or circular saws or grind the ensilage cutter blades on the grinder at school if they are not equipped with electricity on their home farms?

Evening courses in tractor overhauling, farm machinery repairing, tool fitting, etc. for farmers of the community makes the school shop of added value to the farmers. They may not have a place or all of the equipment on the home farm to do this work and welcome an opportunity to work together in a shop especially fitted for such work.

Toy Week

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AS ONE of their Future Farmer activities the vocational agriculture boys of the Conrad High School set aside the week of December 10 to 17 as Toy Week. During this week a drive was put on in the lower grades to have the grade children bring from home as many old toys as possible with the understanding that after they were repaired by the farm shop boys they were to be donated to the Red Cross for distribution to needy children. The idea of Toy Week took well with the grade children and toys of all kinds began coming in. It took the shop class of 40 boys nearly a week to repair and repaint the toys. If these toys were bought new they would cost between \$300 and \$400.

Is the job worthwhile? As a farm shop job it rates low, but as a means of making a happier Christmas for many children we thought it was worth while.

Farm Mechanics Which Should Not Be Overlooked

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SCHOOL subjects which have in themselves a strong inherent interest for young people are likely to be taught without serious thought as to specific objectives. Such a subject is farm mechanics, and in the hands of some teachers it may create a high degree of interest but produce results which have comparatively small permanent value. Farm boys ordinarily like to work with tools. They enjoy repairing an old wagon box or making a new work bench. Teachers in turn are often satisfied with the interest shown by the class and fail to give due regard to certain lasting educational values. The aim of this article is to set up and discuss some farm mechanics objectives which may serve as goals for the teachers who seek to make the most of his course from the standpoint of the student.

A Desire to Turn Out High Grade Work

First of all, the teacher should endeavor to create in his students a desire to turn out a high grade product. This involves the development of a group pride in the work of the entire class and the creation of an attitude of appreciation on the part of each student. The development of this attitude is sometimes difficult where the teaching must be done in connection with a repair job or the making of a self-feeder which will serve the purpose even if the workmanship is crude.

The point to be kept in mind is that the teaching objective is not the complete self-feeder but rather the development of a certain level of ability on the part of the boy, plus a feeling of enjoyment and understanding during the attainment of that ability. The feeder may be made of old lumber and may cost next to nothing, but the construction should show the hand of the craftsman. It may take longer to do a high grade of work, but the results remain in the nervous system of the boy and are apparent in his liking for board ends which are square and joints that fit closely.

The Ability to Make Plans

The next objective which is sometimes overlooked is the development of ability to make one's own plans. It is one thing to make a hog house under the constant supervision of the teacher and quite another to select the proper materials, to figure the cost, and work independently from a blue print or a sketch. Here again, the teacher must see his objective in the development of certain abilities within the student rather than in the saving of time on the job or even the quality of work done.

Outside of the school shop, under normal farm working conditions, the individual must sense his construction or repair problem, lay out his specifications, procure the proper material, use available helps, and proceed with his

work independently. No one expects the boy in the school shop to be an independent worker on his first job. The interesting question is whether he may develop independence and confidence through the methods used by the farm mechanics instructor. Ingenuity and the ability to solve problems appear and grow steadily under the urge of necessity. Thinking, planning, and scheming will be done by the average boy when he faces a real problem and knows that the responsibility for solution is on his shoulders. The teacher should challenge the ability of the boy by expecting self-made plans and then giving help only often enough to stimulate effort and prevent serious error or total failure.

The Ability to Use Printed Helps

There are a number of good reasons why printed helps should be used by every teacher of farm mechanics. First, the student should learn to follow printed directions, to interpret a picture, and read a blue print or a pencil sketch. A pamphlet accompanies each machinery or power unit when sent out by the manufacturer. Usually this pamphlet is illustrated by photographs and by drawings of the parts. The purchaser should be able to understand the working parts of the unit by reading the descriptive matter and studying the illustrations. Every new application of the student's mechanical skill will call for imitation, special oral instruction, or an understanding of printed helps. It would seem that the development of this reading ability should not be neglected in the high school farm mechanics class.

Then comes the question of teacher efficiency in handling a class of 20 to 25 students working on 5 to 15 shop projects. Where the teaching is entirely oral, students may be seen waiting for the teacher's attention. Some teachers spend a large part of their shop time helping students over small difficulties which could easily be solved by the students themselves with the aid of handy printed directions. One teacher will hurry from one detail to the next at the call of trouble and then complain that he has too many things to do. Another will manage his shop with utmost ease, each student demanding his attention for only those plans and procedures not already known or not readily found in print. The latter teacher has time and opportunity to watch his students at work and to offer suggestions which will eliminate error and waste.

Most instruction sheets may be classified as to kind under two general headings. The first, sometimes called the operation sheet, gives technical information and definite procedures in connection with such simple jobs as squaring a board, selecting nails, or operating a blow torch. The second,

commonly known as the job sheet, deals with the construction of articles and emphasizes the proper order of procedure. It tells the student what to do next and shows him how to avoid trouble when variations must be made. Some teachers call these helps "building guides".

Instruction sheets are not intended to replace the teacher. Demonstrations and oral explanations are necessary for inexperienced workers on new jobs, and the instruction sheet then plays its part when the student forgets. He has seen the demonstration, but one direction failed to make the proper impression. The instruction sheet calls it to mind, and he proceeds without loss of his own or the teacher's time. The advantage lies in the development of an ability which will in time make the student independent of the teacher's help.

Practical Farm Shop Work Exhibited at Oregon State Fair

AN 18-year-old two-horse cultivator, worn out plows and harrows renovated to look like new were some of the interesting farm shop exhibits displayed by vocational agriculture students at the Oregon State Fair. New ideas were shown to the visitors in the construction of automatic hog watering troughs, hog self-feeders made from old oil cans, adjustable grain sackers, adjustable sheep panels, and various new devices in the construction of trailers. Hand tools such as axes, shovels, pitch forks, hammers, hoes, and rakes were repaired by sharpening, handle fitting, removing rust, painting, and renewing broken parts. An itemized expense account was attached to each farm shop article exhibit, showing the cost for the work.

The exhibits were judged on the quality of workmanship, practicability of the job and the size of the job. The exhibits were displayed in the Dairy Products building and occupied 35x50 feet.—The Future Farmer, Oregon.

No vision and you perish;
No ideal and you're lost;
Your heart must ever cherish
Some faith at any cost.
Some hope, some dream to cling to,
Some rainbow in the sky,
Some melody to sing to,
Some service that is high.

—Harriet du Autermont.

"It is up to the teacher to create a demand for his work. The instructor who exists only on the basis of federal aid is doomed to failure."—Superintendent C. J. Hartman, Waukee, Iowa.



Evening Schools



Evolution of Evening Class Teaching in Georgia

GEORGE H. KING, Georgia State College of Agriculture

IT IS not the purpose of this article to hold up for criticism the evening classes of the past. The Model V's of today would have been impossible without the Model T's of yesterday. It is safe to assume that the evening classes now conducted by teachers differ as much from evening classes in the past as the shining sedans of steel and nickel differ from the ancient tourings of brass and noise.

There are three stages in this evolution which I present for your consideration.

First, the class of yesteryear was usually held upon an enterprise about which the farmers had an apperceptive base of zero. In the beginning, it seemed that most teachers had the idea that for an evening class to be successful it must be held on an enterprise new to the community and about which the farmers knew nothing or about some enterprise of minor importance which the teacher thought should be a major enterprise. The first evening class that I ever attended was one conducted on poultry in a cotton growing community with a group of men whose sole interest in poultry centered around the consumption rather than the production of the birds. Other classes on record are dairying classes held in communities in which the average number of cows per farm family was less than one. Other classes were conducted on rabbits, pigeons, and similiar enterprises. In Georgia in 1926-27, of the 56 classes conducted, 25 classes were on poultry, and 11 on hogs while none was taught on cotton.

The method of teaching fitted very well the selection of the enterprise to be taught. The teacher, in most instances, reviewed his college textbooks and proceeded to lecture to the few farmers who had gathered for the "meeting at the schoolhouse".

The second stage in the evolution of evening class teaching, and the stage that we are just leaving, shows the transition from the enterprises of remote "probability" to enterprises of "significance". Rather than holding classes on new enterprises or on enterprises of minor importance, classes were conducted on enterprises of major importance. These classes were organized about the needs of the farmers in these particular enterprises.

Classes during this period of development were held strictly on an enterprise basis. The teacher was largely responsible for the selection of the enterprise, selecting the one upon which he thought the farmer needed the most information.

The conference method of teaching

was coming into vogue. Most teachers followed fairly good methods of conducting evening classes. During this period the number and size of evening classes grew rapidly.

It will be noted that all evening classes were conducted on strictly an enterprise basis. As late as 1931, one writer stressed the point that an evening class should be based "on some particular farm enterprise—". Another says the purpose of an evening class is "to study in an organized way specific jobs pertaining to one or more closely related enterprises".

During this stage of evening class development we see the improvement in the selection of subjects to be taught and also the improvement in the methods used in teaching.

While the evening class work in this stage was fundamentally sound, some weaknesses appeared. The first weakness was that the teacher in making the selection of an enterprise to be taught, failed in many cases to have his selection based upon a survey of the community, or upon interviews with the farmers, before holding the classes. This led to guesswork on the part of the teacher in selecting the enterprise to be taught and in selecting the jobs upon which information was most needed.

The second weakness grew out of the first. Since adequate surveys of the farming types of the communities were not made, evening classes were held without taking into consideration the farming types of the communities were no assistance was given to the farmer in planning his farming program to meet changing conditions.

Third: We are still in a transitory stage of evening class teaching. The greatest change now taking place is the change in which the farm is used as the basis in evening class teaching rather than any particular enterprise or specific job. Instead of starting the evening class program in a community by teaching classes in particular enterprises such as cotton, corn, poultry, hogs, etc., the program is now started by teaching classes in farm management. Classes conducted in any particular enterprises grow out of the farm management classes.

For example, a class in farm management has been held in which "Setting up the Farm Program" has been the main job. In making this study the set-ups of successful farms in the locality and section have been analyzed and studied. In addition outlook material on the various enterprises found in successful farming programs has been used. In the course of the study we will suppose that poultry has been

found to be an enterprise on successful farms, and that the outlook on poultry is good. There is then a demand on the part of the farmer for an evening class to be held on poultry. Thus the evening class on an enterprise is the outgrowth of a class on farm management.

During the year 1931-32, 151 classes were conducted in Georgia by teachers of vocational agriculture. Of this number, 89 were classes in farm management. Approximately 40 evening classes in specific enterprises were held by teachers after the members of the farm management classes had realized their needs and requested a special class in a particular enterprise.

The other classes held during the year were typical of the second stage referred to, the teacher selecting the enterprise he thought best suited to the farmer's needs without regard to the farm set-up.

Thus, through this evolution the teacher of vocational agriculture in Georgia has eliminated guesswork and personal preference in his choice of an evening class subject. We have found that by using farm management classes as a base the needs of the farmers of a community are met, and that when classes are taught on an enterprise basis they are the outgrowth of a special demand on the part of the farmers and are attended only by those directly interested in the enterprise being taught.

Evening School Brings \$60,000 Creamery to Arkansas Community

E. B. MATTHEW
State Director of Vocational Education,
Arkansas

AS a direct result of evening school work a \$60,000 creamery has been established at Dardanelle, Arkansas, giving a home market of from one half to a million dollars per year to the farmers within a radius of 50 miles of this center. The development of the dairy industry in this section is nothing short of phenomenal. It has involved vision, confidence, cooperation, and a vast amount of work. Fred A. Smith came to the Dardanelle community seven years ago as agriculture instructor and found the farmers of that locality shipping 25 cans of cream per week. Working through evening schools and with the financial assistance of the Chamber of Commerce, he organized 15 bull blocks. By this method a high pedigree Jersey male was placed in each community. Several car loads of registered Jersey cows and heifers were

imported, and to these were added a number of car loads of grade heifers. In about three years receipts from cream amounted to \$100,000 per year.

At that time Smith organized a three-day dairy tour to points in Missouri where milk and cheese plants were located, with a view of getting a creamery for Dardanelle. About one hundred business men and farmers from his evening schools made the trip, and all came home with one mind—that they did not have sufficient volume to justify a plant such as they desired. So work of increasing the production of the cows and the number and size of the herds was continued. Last year another survey was made, and sufficient work of increasing the production of the dairy population was enumerated to warrant the location of a plant there.

The next thing in order was to interest a company of unquestioned ability and reputation, to get the plant established. To this end, Mr. Smith held conferences with leading firms of the North and eventually succeeded in getting a representative of one of the largest concerns to visit his section. The man came. He was convinced, and on May 18, 1932, a butter plant was dedicated, attended by 10,000 patrons and well-wishers from all sections of the state. On this opening day more than a car load of butter was made, and since then the plant has been so taxed that one extra churn has been installed.

Mr. Smith, when asked to explain the history of the development, said, "When I came to Dardanelle I found the farmers tied to the one-crop system which brought in revenue only once a year. The farmer's income was an uncertain factor, due to the fluctuations in the price of cotton. His farm labor had no sort of seasonal distribution. There were eight or nine months in the year when his earnings were negligible. His expenses were too great. He bought too much and sold too little. Year by year the land was becoming less productive. Many hill farms were almost ruined by erosion. All the land was deteriorating because of the one-crop system. There was little interest in livestock, and no attention was given to pastures.

After organizing several evening schools and talking with many farmers, we concluded that the need of the community could be best served by the dairy cow. The first job was to terrace the hill land to conserve what fertility remained. After this was done, permanent pastures were given consideration, for without good pastures cows are watered stock. By breeding to bulls from high-producing dams, better cows were produced. We imported some registered cows, and in this way still further improved the herds. Gradually the farmers became "cow-minded." This marked the beginning of better days, for whenever a farmer gets a few cows on his hands he automatically diversifies. He raises more feed to increase his profits. He becomes interested in hogs and chickens in order to dispose of his by-product, skim milk. With cows, hogs, and chickens labor distribution is accomplished. This sort of farming is a 365-day proposition. Whenever labor is distributed, so is income. The land becomes more pro-

Check Sheet Helps in Adoption of Improved Practices

FARMERS need help in cashing in on their good intentions," said M. K. Luther, teacher of vocational agriculture at Choteau, Montana, in commenting on a method which he has found effective in checking up on the adoption of improved practices by evening school members.

At the last meeting of an evening school in Turkey Production and Marketing, held by Mr. Luther, each of the 20 members was given a check sheet containing a list of the improved practices worked out during the school and was asked to check new practices that he would adopt and practices previously followed which he proposed to continue. Part of the list as worked out is shown below. (The list worked out contained 27 improved practices—Editor.)

Improved Practices in Producing and Marketing Turkeys

PRACTICES	New practices that I will adopt	Practices previously followed which I will continue
1. Keep turkeys and chickens separate during winter.		
2. Separate turkeys and chickens during laying and incubation seasons.		
3. Feed minerals to breeding stock.		
4. Feed both a scratch and a mash to breeding stock.		
5. Feed alfalfa or clover hay to breeding stock.		
6. Feed cod liver oil during the breeding season.		
7. Confine birds each day until after laying.		
8. Candle eggs previous to setting.		
9. Keep eggs no longer than 10 days before setting.		
10. Watch carefully for worms and treat for them with kamala or nicotine sulphate.		
11. Treat for lice and mites.		
12. Follow the feeding schedule as recommended.		
13. Use a recommended ration for the poults.		
14. Move coops and runs to new ground at least once each week.		
15. Feed nothing on the ground until the birds are on the range.		

Name.....

The original sheet filled out by each farmer was retained by Mr. Luther as a check in making visits to help with the adoption of improved practices. A duplicate sheet, filled out by the teacher and returned to each farmer on the first visit, was used by the farmer as a memorandum of the decisions made by him during the evening school.

ductive, for the cow is the best land builder known. The cow is the best farm relief program yet devised for our section. She points the way to diversification, builds up the land, and increases profits."

This butter plant at Dardanelle, the direct result of evening school instruction, will be invaluable in promoting evening school work in other communities. This particular creamery specializes in quality butter which sells at a premium. Quality cream therefore is essential to quality butter. This problem will be taken care of in evening schools in the patronage area of the Dardanelle creamery which includes some fifty Smith-Hughes centers. Yell County alone, in which the creamery is located, has seven full-time agriculture instructors. Mr. Fred A. Smith is still running true to form. In 1929 he was recognized as the Master Teacher of the Southern Region, and this recent development and contribution to the farming industry in Arkansas is no more than those who know him have become accustomed to expect.

Worthwhile Folks Don't Just Happen

Worthwhile folks don't just happen. You aren't born worth while; you are born only with the possibilities of becoming worthwhile. Your job is to discover and develop the man or woman you ought to be. "Sooner or later we sit down to the banquet of consequences."—R. L. Stevenson, IHC Bulletin, "Young Folks—Do Something and Be Somebody."

The Curriculum

The following comment on the high school curriculum was taken from the September issue of the "Mississippi Vocational News" bulletin.

"Revise the curriculum. This will save money and improve the schools, particularly the high schools.—Free the high school from the costly domination of college entrance requirements unrelated to present needs. Emphasize especially economic education."—Clyde R. Miler.



Future Farmers of America



Young Farmers of New York Hold Seventh Annual Convention

THE Seventh Annual convention of the Association of Young Farmers of New York was held September 3, 4, and 5, at the State Fair grounds. The first two days were given over to a meeting of delegates at which the business of the Association and plans for 1932 were taken up. This meeting was on the Saturday and Sunday prior to the opening of the State Fair; 250 persons were in attendance, including 180 delegates from 90 chapters, candidates for the Empire Farmer degree, chapter advisers, and visitors.

Thirty-three young farmers, each of whom had previously been visited by one or more members of the state advisory council, were recommended for the degree of Empire Farmer, duly elected by the delegates, and each presented with the gold State Farmer key of F. F. A. and a certificate by the Association of Young Farmers of New York.

On Monday, the first day of the State Fair, the annual Young Farmers' speaking contest and judging contest were carried out. This is the sixth successive year for the speaking contest in New York. Each year has seen a greater number of chapters taking part. A series of contests, beginning with that held in the local chapter and extending through county and sectional contests, results in the selection of the eight individuals on the final program. Each young man appearing on the final program receives \$10 from the State Fair, and \$60 is made available for the winner to take care of his expenses in attending the regional contest among the eastern states representatives in competition for the right to attend the National F. F. A. contest at Kansas City.

The State Chapter Contest was carried out as in former years, and selection of the three highest made for the F. F. A. chapter competition. Among the contests of the year, probably the most worthwhile undertaken by local chapters was in dairy herd improvement.

The Dairymen's League Cooperative Association sponsored this event through offering \$100 to be given as awards to chapter groups doing the best work throughout the year in keeping dairy herd improvement records. Altogether, some 40 different chapter groups, involving a total of 913 boys and the keeping of complete milk, butter fat, and feeding records on over 20,000 cows, were represented in this new feature. The chapter at Frank-

linville was awarded first place in this activity.

The usual judging contest program was carried out except that less emphasis was given to this feature, and more emphasis to the delegate program and the contests that involved the rating of achievements made by all the individuals in a local chapter working together as a group. Altogether, 117 of the 145 chapters of the state were represented by a total of 475 farm boys.

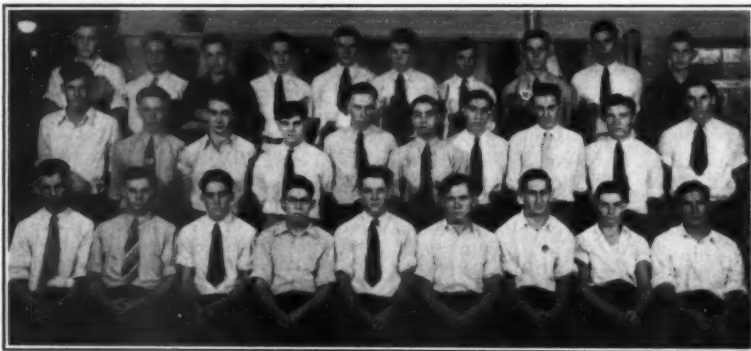
While at this meeting, the group was cared for in the quarters of the new Boys and Girls Building of the State Fair. W. J. Weaver, Supervisor of Agricultural Education of New York, had charge of the administration of the boys' and girls' work at the Fair, and the organization and conduct of the Young Farmers program was also under his direction.

arrangements for the radio presentation were made.

The Princess Anne boys came to Washington, D. C., on October 8 and spent two days in educational trips.

Another Reporter Reports Tests Corn Varieties

FOR the third successive year, Bledsoe Chapter has conducted the Twenty-five Variety Corn Test in cooperation with, and under the supervision of, the Department of Agronomy of the University of Tennessee. For three years Neal's Paymaster has been the leading variety. As one result of this project, the number of acres planted to Neal's Paymaster in our country has materially increased.



Young Farmers of New York who were awarded the Empire Farmer Degree at the Seventh Annual State Convention.

Princess Anne, Maryland Chapter Appears on the National F. F. A. Radio Hour

The Princess Anne, Maryland, Chapter presented their playlet entitled "Washington the Farmer" on the F. F. A. National Radio Program during the N. B. C. Farm and Home Hour on October 10.

The playlet, 22 minutes in length, was a production of the chapter. Mr. H. H. Anderson, the teacher of vocational agriculture and local F. F. A. adviser, was largely responsible for its composition. It was presented originally by the Princess Anne boys in a Bi-centennial program in March. The quality of the production and the staging were established at that time, and

Members Grow Baby Beeves

Twenty baby beeves were grown by 17 of our members as a cooperative beef project, in addition to our regular program of project work. These calves were sold cooperatively at the Tennessee Fat Stock Show in Nashville.

Last month, we published an article from the reporter of a local F. F. A. Chapter in Pennsylvania. Here is another article by a reporter. It is by Henry Bickford of the Bledsoe Chapter, Pikeville, Tennessee. Will other reporters please take notice.
H. O. Sampson
Special F. F. A. Editor

Capons for Profit

When broilers were selling for 8 cents per pound last summer, we decided to
(Continued on Page 96)

Suggested Procedure for Conducting Father and Son Banquet

I. Who will prepare banquet?

- A. If possible, have home economics class at school.

Others who might prepare banquet.

1. Mothers of boys
2. Local Grange.
3. Sisters of boys.

II. Arrange menu

- A. Have menu committee confer with home economics department.

Boys furnish chicken, milk, butter, vegetables, fresh and canned fruits, pickles, etc.

III. Table usage and courtesies

- A. Have home economics instructor explain table service and courtesy as applied to the particular menu at meeting preceding banquet.

Uses of silver and dishes needed. Plan of service to be used. When to begin eating, etc. Relation of meal service and program.

IV. Financing banquet

- A. Boys bring most of food from home, consequently very little food need be purchased. Figure out cost of meal. Raise money by shows, fairs, carnivals, selling subscriptions to farm magazines, etc.

V. Invitations

- A. Each boy invite father. Invite school board members, principal, superintendent, county agent, county school superintendent, business men, neighboring F. F. A. presidents and instructors, state advisers of F. F. A., local editor, master of grange, county judge, president of Chamber of Commerce, members of legislature in community, etc. Write up story for local paper. Written invitations may be used for fathers. Ask typing teacher to cooperate by having class type letters.

VI. Decorating room.

- A. Have committee of home economics girls take charge. Committee of boys work with them. Use agricultural products, F. F. A. banners, ribbons, pennants, cups, to decorate. Silhouettes of boys' projects cut from black paper used as place cards. Confer with home economics and art departments.

VII. Welcoming guests

- A. Boys stay with dads entire evening. Introduce to other boys and their dads. Entertain them for evening. Have special reception committee to take care of special guests as they arrive. Introduce to strangers. Introduce to superintendent and principal. Show dad and guests place at banquet table. Entertainment of dads and

guests by boys is one of biggest jobs for a successful banquet. Reception committee might be president, secretary, other officers, or some other F. F. A. boys appointed by president. Boys should always take care of dads first.

Topics boys might talk about to guests in informal way: Management of banquet, program of F. F. A., number of boys taking agriculture, shop and classroom work, school athletics, farm projects. Always show and express appreciation to business men, school board, and dads for interest taken in promoting vocational agriculture.

VIII. Serving.

- A. Home economics and agriculture instructors should know each others' program such as menu, time of banquet, when ready to serve, arrangement of place cards, serving with least confusion, etc. Programs should work together.

IX. Banquet and program.

- A. Each boy enters room with dad and sits beside him. Boy may also have special guests other than his dad.
- B. Have good music while group is eating. Piano, radio, band, etc.
- C. Boy should always act as toastmaster. May be president or some other F. F. A. member appointed by executive committee. In this case president introduces toastmaster.
- D. Boy returns thanks. Boy can have short prayer memorized.
- E. Opening ceremony. Officers should have parts thoroughly memorized.
- F. Serve first course.
- G. Member of chapter welcomes dads.
- H. Serve second course.
- I. Have boys introduce their dads.
- J. Boys who make talks should be thoroughly coached as to what they are going to say.
- K. Music — a selection by member of chapter, if possible.
- L. F. F. A. program of work by member.
- M. Serve third course (if any).
- N. Have few boys tell about their projects.
- O. Toastmaster express thanks and appreciation to home economics girls. Have girls march out along wall. Should plan to have some girl say a few words in reply.
- P. Summary of last year's work in F. F. A. and vocational agriculture.
- Q. Short talk by special speakers—

president of State Association, president of some other local chapter, president of Chamber of Commerce, state supervisor or director, local editor, prominent farmers. Remember, the boys are entertaining dads, so do not have too many adult speakers.

- R. F. F. A. initiation after banquet is very appropriate. Stunts, contests, boxing, or other amusement might be put on in gym after banquet.

X. Courtesies after banquet.

- A. Make prompt payment of bills. All bills paid by treasurer should be properly receipted.
- B. Return all borrowed articles immediately.
- C. Replace all furniture before school. A special cleanup committee is advisable.
- D. Formally thank all who are not members of chapter who helped to make the banquet a success. Ask English teacher to help compose cordial notes. Ask typewriting teacher to get students to do typing.

XI. Publicity.

- A. Reporter, with aid of instructor, prepare article for local paper, school, or chapter paper. Girl from commercial department should be invited to take entire program down in shorthand, including speeches. This information may be copied next day and used by reporter in writing article.

XII. Check up.

- A. Analyze the undertaking at next regular meeting. What were good points, what to do differently next time, etc. See that secretary makes full reports on program on these suggestions.

XIII. Miscellaneous.

- A. Banquet should be from 1½ to 2 hours in length.
- B. Start not later than 7 o'clock.
- C. Some fathers are reluctant about coming; have chapter president or instructor call by phone or by personal call.
- D. Toastmaster should be well coached on handling program. A few remarks about each speaker, or a story well told by the toastmaster is very good. Toastmaster should rehearse his speech. A good toastmaster certainly helps make a successful banquet.
- E. The instructor who can engineer a successful banquet and can stay in the background and still direct the activities is a man to be congratulated and respected in his community.
- F. Time should be taken at a regular F. F. A. meeting to rehearse

the banquet program.

G. Banquets as a whole are too long, and in order to get around this difficulty it is a good idea to start the program while the meal is being served.

H. Remember, this is a banquet given by boys for dads and other guests. The boys consider it an honor to talk, and the invited guests appreciate this training. But remember, it is up to the instructor to see that each boy who is to talk has his speech well planned and has rehearsed it two or three times.

I. A few remarks from some of the invited guests, at the last part of the program, is good business and extends the courtesy they should be given.

J. Place father and son banquet on school calendar.

K. Have some boy who has graduated from high school who has taken vocational agriculture, appear on the program.

L. A successful banquet depends on the cooperation of everyone concerned and the amount of cooperation received from outside sources.

— The Vocational Oregonian.

Influence of John Dewey

(Continued from Page 84)

teaching farming vocations makes it possible for teachers to grasp readily and to apply Dewey's analysis in organizing and supervising pupil activities. In the opinion of the writer, Dewey's paramount influence in agricultural education resides in his consistent emphasis upon sound judgment as an aim in education. Research work in all branches of production, farm management and farm organization, point conclusively to the utter futility of an operator attempting to deal with the problems of modern farming without possessing good judgment in dealing with the constantly changing conditions. The crux of the supervised farm practice program as an integral part of all vocational teaching in agriculture is the opportunity thus provided to pupils for becoming proficient in the ability to make sound judgments. Other phases of our vocational teaching in such fields as the study of local farm difficulties, field studies, the study of community needs, and the like, also furnish opportunity for pupil judgment. Scarcely a member of our profession has reached his present position of responsibility in guiding youth without grasping many of the influences which Dewey has exercised upon his thinking and his teaching practices. May we close our discussion as we began it, with the suggestion that the progress of any age is measured by the quality of its thought. It now seems that never before in the history of man, has the demand for thinking ability been so acute. We shall profit richly by choosing, each for himself, a selected group of Dewey's books and articles so that we may turn to them frequently to gain new inspiration from and to accept the imperative challenge of this leading American.

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13. " " " p. 101
14. " " " p. 104

President-Elect a Friend of Vocational Agriculture

The letter which follows shows Mr. Roosevelt's attitude toward vocational agriculture. The editor has had the copy of the letter since August. He has not seen fit to publish it in the magazine, as the motive might have been misinterpreted.

July 29, 1932

Mr. C. A. Cobb, Editor
The Progressive Farmer and
Southern Ruralist,
Atlanta, Ga.

My dear Mr. Cobb:

I have received your letter of July nineteenth inquiring about my attitude toward the support of agricultural education.

I have spoken often on this subject in this State, so that our people here have no doubt whatever about where I stand. I believe thoroughly in agricultural education. I regard it as one of the most important and essential branches of the whole educational effort that is being carried on in the United States. I am a firm believer also in the value of the cooperative research and experimental work and the extension service, which state institutions in cooperation with the Federal Government are rendering.

I think it would be nothing short of a disaster if any of this work were seriously curtailed. Particularly, in these times when farmers are having such a desperate struggle to maintain themselves, I think it supremely important that they should have the benefit of the expert advice that colleges, experiment stations and extension services are able to give them and it is equally important that we should continue to hold out to their children opportunities for an education that will make them something more than field drudges.

What I have said with respect to the agricultural colleges and their allied services applies with equal force to the lesser schools of agriculture and to the agricultural education now being carried on with such excellent promise in consolidated high schools in the rural communities.

I am glad that I have had the opportunity of expressing myself on this subject on which I have very strong convictions.

Very sincerely yours,

(Signed) Franklin D. Roosevelt

Problem Procedures

(Continued from Page 89)

I cannot dismiss the topic without at

least a bare outline of what seems to me the proper technique for conducting the discussion leading to the solution of the problem.

1. The written solutions for the problem should be collected at the beginning of the period. Nothing has been said about these written solutions, but they should be regarded as important and as a general rule they should be required. Much could be said in support of this practice if space permitted.

2. After the written solutions have been collected, individual students should be asked to state their solutions. No reasons or arguments should be allowed until every member of the class has submitted his solution, either by an expressed statement or by agreement with a solution already advanced by another class member.

3. After all members are committed on some one of the solutions submitted, reasons for his solution and the process by which he arrived at it should be requested of some individual member. It is a good technique to call upon the dullest and most timid of the group first, since at the first of the discussion such students will find it much more possible to contribute to the discussion than later on when the brightest have advanced their reasons. After the weaker ones have done their best, there will still be opportunity for the brightest to make substantial contributions to the thought of the class.

4. The next step consists of evaluating the significance of evidence, consisting mainly of fact material advanced by the students, and arriving at the conclusions which it seems to warrant. (It is understood that the instructor suggests any important facts which have been overlooked.) In the process of evaluation, the different items of evidence should be listed upon the board, if regarded at all as significant. These items are first evaluated on the basis of their authenticity, and those that stand this scrutiny are further examined as to their bearings on the proposed solution which is being examined. Some measure of the relative weight or significance of each of the items of evidence, should be adopted and each item carefully evaluated in terms of it. When this has been done to all the items of evidence and no others can be found, the conclusion which the bulk of the evidence supports should be definitely decided upon as the proper one. In some cases, the evidence, when collected and evaluated, and the proper relationships established, will point toward a modification or revision of one of the proposed solutions. Then the class should be required to formulate a careful statement of the acceptable solution.

Another Reporter Reports

(Continued from Page 94)

convert ours into capons and thus increase our profits. Over 400 birds were caponized, 74 per cent of our members growing 6 to 37 capons each. These capons are to be sold cooperatively, and the money put into our thrift bank. A part of it will be used to defray our expenses to Camp Clements, next summer.

